SEQUENCE LISTING

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<110>  Bienkowska, Jadwiga
       Mcallister, Gregg

<120>  Novel Preadipocyte Factor-1-Like Polypeptides

<130>  ARS.113

<140>  US 10/540,845
<141>  2005-06-27

<150>  US 60/436,815
<151>  2002-12-27

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<170>  PatentIn version 3.3

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c atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc att     169
  Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
  1               5                  10                  15

ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac     217
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
                20                  25                  30

tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt     265
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35                  40                  45

gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct     313
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50                  55                  60

ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac     361
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

agt ggc tgg gca ggc aag ttc tgt gac aaa ggc ttc cat ggg cgt gac     409
Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp
                85                  90                  95

tgc gag cgc aag gct gga ccc tgt gaa cag gca ggc tcc cca tgc cgc     457
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Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg
            100                 105                 110

aat ggc ggg cag tgc cag gac gac cag ggc ttt gct ctc aac ttc acg     505
Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr
            115                 120                 125

tgc cgc tgc ttg gtg ggc ttt gtg ggt gcc cgc tgt gag gta aat gtg     553
Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val
        130                 135                 140

gat gac tgc ctg atg cgg cct tgt gct aac ggt gcc acc tgc ctt gac     601
Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp
145                 150                 155                 160

ggc ata aac cgc ttc tcc tgc ctc tgt cct gag ggc ttt gct gga cgc     649
Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg
                165                 170                 175

ttc tgc acc atc aac ctg gat gac tgt gcc agc cgc cca tgc cag aga     697
Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg
            180                 185                 190

ggg gcc cgc tgt cgg gac cgt gtc cac gac ttc gac tgc ctc tgc ccc     745
Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro
        195                 200                 205

agt ggc tat ggt ggc aag acc tgt gag ctt gtc tta cct gtc cca gac     793
Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp
        210                 215                 220

ccc cca acc aca gtg gac acc cct cta ggg ccc acc tca gct gta gtg     841
Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val
225                 230                 235                 240

gta cct gcc acg ggg cca gcc ccc cac agc gca ggg gct ggt ctg ctg     889
Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu
                245                 250                 255

cgg atc tca gtg aag gag gtg gtg cgg agg caa gag gct ggg cta ggt     937
Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly
                260                 265                 270

gag cct agc ttg gtg gcc ctg gtg gtg ttt ggg gcc ctc act gct gcc     985
Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala
            275                 280                 285

ctg gtt ctg gct act gtg ttg ctg acc ctg agg gcc tgg cgc cgg ggt    1033
Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly
        290                 295                 300

gtc tgc ccc cct gga ccc tgt tgc tac cct gcc cca cac tat gct cca    1081
Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro
305                 310                 315                 320

gcg tgc cag gac cag gag tgt cag gtt agc atg ctg cca gca ggg ctc    1129
Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu
            325                 330                 335
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ccc ctg cca cgt gac ttg ccc cct gag cct gga aag acc aca gca ctg    1177
Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
        340             345             350

tga tggaggtggg ggctttctgg cccccttcct cacctcttcc acccctcaga    1230

ctggagtggt ccgttctcac caccccttcag cttgggtaca cacacagagg agacctcagc    1290

ctcacaccag aaatattatt tttttaatac acagaatgta agatggaatt ttatcaaata    1350

aaactatgaa aatgcaagtg ggctcctatg ccagaaaaac ccacctggcg ttccagatgc    1410

aagagggcca gagcagaggc ctggttctgg ggaagcctca ggatgctgcc caccaaggag    1470

tgatttccaa agagtaatcc agggtgccct tttcccttct ggggaagtgt ggagaggtag    1530

agccccagag gagaatgtaa acaagcagcc agcacctctg tataggcccg gcctggatca    1590

gagagagggg agaactctgc agggtgtggg attgggctca gggacctccg agtgaggcag    1650

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<213>   homo sapiens

<400>   2
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Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5               10              15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20              25              30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35              40              45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50              55              60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65              70              75              80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp
            85              90              95

Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg
            100             105             110

Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr
        115             120             125

Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val
        130             135             140

Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp
145             150             155             160
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Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg
            165   170   175

Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg
            180   185   190

Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro
            195   200   205

Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp
    210   215   220

Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val
225   230   235   240

Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu
            245   250   255

Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly
            260   265   270

Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala
            275   280   285

Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly
    290   295   300

Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro
305   310   315   320

Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu
            325   330   335

Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
            340   345   350

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<212>   PRT
<213>   homo sapiens

<400>   3

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala
1   5   10   15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp
            20   25   30

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His
        35   40   45

Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala
    50   55   60

Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp Cys Glu Arg Lys
65   70   75   80

Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln
             85   90   95

Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu
            100   105   110

Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu
        115   120   125

Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg
    130   135   140

Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile
145   150   155   160

Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys
            165   170   175

Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly
        180   185   190

Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr
        195   200   205

Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr
    210   215   220

Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val
225   230   235   240

Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu
            245   250   255

Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala
        260   265   270

Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro
    275   280   285

Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp
    290   295   300

Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg
305   310   315   320

Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
            325   330

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<213>   homo sapiens

<400>   4

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1   5   10   15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20   25   30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35   40   45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
        50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp
                85   90   95

Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg
            100   105   110

Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr
        115   120   125

Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val
    130   135   140

Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp
145   150   155   160

Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg
                165   170   175

Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg
            180   185   190

Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro
        195   200   205

Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp
    210   215   220

Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val
225   230   235   240

Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu
                245   250   255

Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly
            260   265   270

Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala
            275   280   285

Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly
        290   295   300

Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro
305   310   315   320

Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu

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                    325                     330                     335
Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
            340                 345                 350

His His His His His His
            355


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<213>   homo sapiens

<400>   5

Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile
1                   5                   10                  15

Cys His Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile
            20                  25                  30

Cys Thr Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp
            35                  40                  45

Gly Gly Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg
    50                  55                  60

Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys
65                  70                  75                  80

Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe
                85                  90                  95

Thr Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn
            100                 105                 110

Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu
            115                 120                 125

Asp Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly
            130                 135                 140

Arg Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln
145                 150                 155                 160

Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys
                165                 170                 175

Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro
            180                 185                 190

Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val
            195                 200                 205

Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu
    210                 215                 220

Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu
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225                    230                    235                    240

Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala
                245                250                255

Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg
                260                265                270

Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala
                275                280                285

Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly
    290                295                300

Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala
305                310                315                320

Leu
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<210>  6
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<213>  homo sapiens

<400>  6

Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile
1               5                  10                 15

Cys His Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro
                20                 25                 30

Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His
                35                 40                 45

Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala
    50                 55                 60

Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys
65                 70                 75                 80

Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val
                85                 90                 95

Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met
                100                105                110

Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe
    115                120                125

Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn
    130                135                140

Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg
145                150                155                160

Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly
                165                170                175
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Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val
            180             185             190

Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly
        195             200             205

Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys
        210             215             220

Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val
225             230             235             240

Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr
            245             250             255

Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly
            260             265             270

Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln
        275             280             285

Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp
        290             295             300

Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
305             310             315
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Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5               10              15

ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac    96
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20              25              30

tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt    144
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35              40              45

gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct    192
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50              55              60

ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac    240
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65              70              75              80
```

```
agt ggc tgg gca gat gaa cat atc tgt acc acg cag tcc ccc tgc cag    288
Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
                85                  90                  95

aat gga ggc cag tgc atg tat gac ggg ggc ggt gag tac cat tgt gtg    336
Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val
            100                 105                 110

tgc tta cca ggc ttc cat ggg cgt gac tgc gag cgc aag gct gga ccc    384
Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
        115                 120                 125

tgt gaa cag gca ggc tcc cca tgc cgc aat ggc ggg cag tgc cag gac    432
Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
    130                 135                 140

gac cag ggc ttt gct ctc aac ttc acg tgc cgc tgc ttg gtg ggc ttt    480
Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
145                 150                 155                 160

gtg ggt gcc cgc tgt gag gta aat gtg gat gac tgc ctg atg cgg cct    528
Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
                165                 170                 175

tgt gct aac ggt gcc acc tgc ctt gac ggc ata aac cgc ttc tcc tgc    576
Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
            180                 185                 190

ctc tgt cct gag ggc ttt gct gga cgc ttc tgc acc atc aac ctg gat    624
Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
        195                 200                 205

gac tgt gcc agc cgc cca tgc cag aga ggg gcc cgc tgt cgg gac cgt    672
Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
    210                 215                 220

gtc cat gac ttc gac tgc ctc tgc ccc agt ggc tat ggt ggc aag act    720
Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
225                 230                 235                 240

tgt gag ctt gtc tta cct gtc cca gac ccc cca acc aca gtg gac acc    768
Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr
                245                 250                 255

cct cta ggg ccc acc tca gct gta gtg gta cct gcc acg ggg cca gcc    816
Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            260                 265                 270

ccc cac agc gca ggg gct ggt ctg ctg cgg atc tca gtg aag gag gtg    864
Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
        275                 280                 285

gtg cgg agg caa gag gct ggg cta ggt gag cct agc ttg gtg gcc ctg    912
Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu
    290                 295                 300

gtg gtg ttt ggg gcc ctc act gct gcc ctg gtt ctg gct act gtg ttg    960
Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu
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305                    310                    315                    320

ctg acc ctg agg gcc tgg cgc cgg ggt gtc tgc ccc cct gga ccc tgt          1008
Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys
                325                    330                    335

tgc tac cct gcc cca cac tat gct cca gcg tgc cag gac cag gag tgt          1056
Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys
                340                    345                    350

cag gtt agc atg ctg cca gca ggg ctc ccc ctg cca cgt gac ttg ccc          1104
Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro
                355                    360                    365

cct gag cct gga aag acc aca gca ctg caccatcacc atcaccat                   1149
Pro Glu Pro Gly Lys Thr Thr Ala Leu
        370                    375
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<210>   8
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<212>   PRT
<213>   homo sapiens

<400>   8
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Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5                   10                  15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
                20                  25                  30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35                  40                  45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
        50                  55                  60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
                85                  90                  95

Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val
            100                 105                 110

Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
            115                 120                 125

Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
        130                 135                 140

Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
145                 150                 155                 160

Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
            165                 170                 175
```

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
            180   185   190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
            195   200   205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
    210   215   220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
225   230   235   240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr
            245   250   255

Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            260   265   270

Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
            275   280   285

Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu
    290   295   300

Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu
305   310   315   320

Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys
            325   330   335

Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys
            340   345   350

Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro
            355   360   365

Pro Glu Pro Gly Lys Thr Thr Ala Leu
    370   375

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<211>   357
<212>   PRT
<213>   homo sapiens

<400>   9

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala
1   5   10   15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp
            20   25   30

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His
            35   40   45

Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala
    50   55   60

Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln
65   70   75   80

Cys Met Tyr Asp Gly Gly Glu Tyr His Cys Val Cys Leu Pro Gly
            85   90   95

Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala
            100   105   110

Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe
        115   120   125

Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg
    130   135   140

Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly
145   150   155   160

Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu
            165   170   175

Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser
            180   185   190

Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe
        195   200   205

Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val
    210   215   220

Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro
225   230   235   240

Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala
            245   250   255

Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln
            260   265   270

Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly
        275   280   285

Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg
    290   295   300

Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala
305   310   315   320

Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met
            325   330   335

Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly
            340   345   350

Lys Thr Thr Ala Leu
        355

<210> 10

<211> 383
<212> PRT
<213> homo sapiens

<400> 10

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1   5   10   15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20   25   30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35   40   45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
                85   90   95

Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val
            100   105   110

Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
        115   120   125

Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
    130   135   140

Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
145   150   155   160

Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
            165   170   175

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
            180   185   190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
        195   200   205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
    210   215   220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
225   230   235   240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Thr Thr Val Asp Thr
            245   250   255

Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            260   265   270

Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
            275   280   285

```
Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu
    290                 295             300
```

```
Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu
305             310                 315                 320
```

```
Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys
                325             330             335
```

```
Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys
                340             345             350
```

```
Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro
            355             360             365
```

```
Pro Glu Pro Gly Lys Thr Thr Ala Leu His His His His His His
    370             375             380
```


```
<210>   11
<211>   420
<212>   DNA
<213>   homo sapiens
```

```
<220>
<221>   CDS
<222>   (1)..(402)
```

```
<400>   11
atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc att        48
Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5               10                  15
```

```
ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac        96
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20                  25                  30
```

```
tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt       144
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35                  40                  45
```

```
gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct       192
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
        50                  55                  60
```

```
ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac       240
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80
```

```
agt ggc tgg gca ggc aag ttc tgt gac aaa gat gaa cat atc tgt acc       288
Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
                85                  90                  95
```

```
acg cag tcc ccc tgc cag aat gga ggc cag tgc atg tat gac ggg ggc       336
Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100                 105                 110
```

```
ggt gag tac cat tgt gtg tgc tta cca ggc ttc cat ggg cgt gac tgc        384
Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
        115                     120                 125

gag cgc aag gct gga ccc caccatcacc atcaccat                            420
Glu Arg Lys Ala Gly Pro
        130
```

```
<210>  12
<211>  134
<212>  PRT
<213>  homo sapiens

<400>  12

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5                   10                  15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20                  25                  30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35                  40                  45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50                  55                  60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
            85                  90                  95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100                 105                 110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
        115                 120                 125

Glu Arg Lys Ala Gly Pro
        130
```

```
<210>  13
<211>  114
<212>  PRT
<213>  homo sapiens

<400>  13

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala
1               5                   10                  15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp
            20                  25                  30

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His
        35                  40                  45
```

```
Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala
    50                  55                  60

Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro
65                  70                  75                  80

Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His
                85                  90                  95

Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala
                100                 105                 110

Gly Pro
```

```
<210>  14
<211>  140
<212>  PRT
<213>  homo sapiens

<400>  14

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5                   10                  15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
                20                  25                  30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35                  40                  45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50                  55                  60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
                85                  90                  95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
                100                 105                 110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
            115                 120                 125

Glu Arg Lys Ala Gly Pro His His His His His His
    130                 135                 140
```

```
<210>  15
<211>  1167
<212>  DNA
<213>  homo sapiens


<220>
<221>  CDS
```

<222>   (1)..(1149)

<400>   15

```
atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc att        48
Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5                   10                  15

ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac        96
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20                  25                  30

tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt       144
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35                  40                  45

gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct       192
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50                  55                  60

ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac       240
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

agt ggc tgg gca ggc aag ttc tgt gac aaa gat gaa cat atc tgt acc       288
Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
                85                  90                  95

acg cag tcc ccc tgc cag aat gga ggc cag tgc atg tat gac ggg ggc       336
Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100                 105                 110

ggt gag tac cat tgt gtg tgc tta cca ggc ttc cat ggg cgt gac tgc       384
Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
            115                 120                 125

gag cgc aag gct gga ccc tgt gaa cag gca ggc tcc cca tgc cgc aat       432
Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn
    130                 135                 140

ggc ggg cag tgc cag gac gac cag ggc ttt gct ctc aac ttc acg tgc       480
Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys
145                 150                 155                 160

cgc tgc ttg gtg ggc ttt gtg ggt gcc cgc tgt gag gta aat gtg gat       528
Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp
                165                 170                 175

gac tgc ctg atg cgg cct tgt gct aac ggt gcc acc tgc ctt gac ggc       576
Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly
            180                 185                 190

ata aac cgc ttc tcc tgc ctc tgt cct gag ggc ttt gct gga cgc ttc       624
Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe
            195                 200                 205

tgc acc atc aac ctg gat gac tgt gcc agc cgc cca tgc cag aga ggg       672
Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly
    210                 215                 220
```

```
gcc cgc tgt cgg gac cgt gtc cac gac ttc gac tgc ctc tgc ccc agt        720
Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser
225             230             235             240

ggc tat ggt ggc aag acc tgt gag ctt gtc tta cct gtc cca gac ccc        768
Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro
                245             250             255

cca acc aca gtg gac acc cct cta ggg ccc acc tca gct gta gtg gta        816
Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val
                260             265             270

cct gcc acg ggg cca gcc ccc cac agc gca ggg gct ggt ctg ctg cgg        864
Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg
                275             280             285

atc tca gtg aag gag gtg gtg cgg agg caa gag gct ggg cta ggt gag        912
Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu
                290             295             300

cct agc ttg gtg gcc ctg gtg gtg ttt ggg gcc ctc act gct gcc ctg        960
Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu
305             310             315             320

gtt ctg gct act gtg ttg ctg acc ctg agg gcc tgg cgc cgg ggt gtc       1008
Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val
                325             330             335

tgc ccc cct gga ccc tgt tgc tac cct gcc cca cac tat gct cca gcg       1056
Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala
                340             345             350

tgc cag gac cag gag tgt cag gtt agc atg ctg cca gca ggg ctc ccc       1104
Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro
                355             360             365

ctg cca cgt gac ttg ccc cct gag cct gga aag acc aca gca ctg          1149
Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
370             375             380

caccatcacc atcaccat                                                    1167
```

```
<210>  16
<211>  383
<212>  PRT
<213>  homo sapiens

<400>  16
```

```
Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5               10              15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
                20              25              30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35              40              45
```

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
            85   90   95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100   105   110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
        115   120   125

Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn
    130   135   140

Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys
145   150   155   160

Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp
            165   170   175

Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly
            180   185   190

Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe
        195   200   205

Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly
    210   215   220

Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser
225   230   235   240

Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro
            245   250   255

Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val
        260   265   270

Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg
        275   280   285

Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu
    290   295   300

Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu
305   310   315   320

Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val
            325   330   335

Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala
            340   345   350

Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro
        355   360   365

Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
   370   375   380

<210> 17
<211> 363
<212> PRT
<213> homo sapiens

<400> 17

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala
1   5   10   15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp
            20   25   30

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His
        35   40   45

Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala
   50   55   60

Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro
65   70   75   80

Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His
            85   90   95

Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala
        100   105   110

Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys
        115   120   125

Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val
   130   135   140

Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met
145   150   155   160

Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe
            165   170   175

Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn
        180   185   190

Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg
        195   200   205

Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly
   210   215   220

Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val
225   230   235   240

Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly
            245   250   255

Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys
            260   265   270

Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val
            275   280   285

Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr
            290   295   300

Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly
305   310   315   320

Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln
                325   330   335

Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp
                340   345   350

Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu
            355   360

<210> 18
<211> 389
<212> PRT
<213> homo sapiens

<400> 18

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1   5   10   15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20   25   30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35   40   45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
            50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
                85   90   95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100   105   110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
            115   120   125

Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn
            130   135   140

Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys
145   150   155   160

Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp
                165   170   175

Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly
            180   185   190

Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe
            195   200   205

Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly
    210   215   220

Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser
225   230   235   240

Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro
            245   250   255

Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val
        260   265   270

Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg
        275   280   285

Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu
    290   295   300

Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu
305   310   315   320

Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val
            325   330   335

Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala
            340   345   350

Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro
        355   360   365

Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu His
    370   375   380

His His His His His
385

<210>   19
<211>   37
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009SV3-EX1 primer

<400>   19
aagcaggctt cgccaccatg cccagcggct gccgctg   37

```
<210>   20
<211>   35
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009SV3-EX2 primer

<400>   20
gtgatggtga tggtgcagtg ctgtggtctt tccag                                    35


<210>   21
<211>   37
<212>   DNA
<213>   Artificial sequence

<220>
<223>   GCP Forward

<400>   21
ggggacaagt ttgtacaaaa aagcaggctt cgccacc                                  37


<210>   22
<211>   51
<212>   DNA
<213>   Artificial sequence

<220>
<223>   GCP Reverse

<400>   22
ggggaccact ttgtacaaga aagctgggtt tcaatggtga tggtgatggt g                  51


<210>   23
<211>   20
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009SV3-SP1 primer

<400>   23
tgatgcggcc ttgtgctaac                                                     20


<210>   24
<211>   20
<212>   DNA
<213>   Artificial sequence

<220>
<223>   pEAK12F primer

<400>   24
gccagcttgg cacttgatgt                                                     20
```

```
<210>   25
<211>   20
<212>   DNA
<213>   Artificial sequence

<220>
<223>   pEAK12R primer

<400>   25
gatggaggtg gacgtgtcag                                        20


<210>   26
<211>   18
<212>   DNA
<213>   Artificial sequence

<220>
<223>   21M13 primer

<400>   26
tgtaaaacga cggccagt                                          18


<210>   27
<211>   18
<212>   DNA
<213>   Artificial sequence

<220>
<223>   M13REV primer

<400>   27
caggaaacag ctatgacc                                          18


<210>   28
<211>   20
<212>   DNA
<213>   Artificial sequence

<220>
<223>   T7 primer

<400>   28
taatacgact cactataggg                                        20


<210>   29
<211>   18
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SP6 primer

<400>   29
atttaggtga cactatag                                          18
```

```
<210>   30
<211>   37
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009SV4-EX1 primer

<400>   30
aagcaggctt cgccaccatg cccagcggct gccgctg                              37


<210>   31
<211>   35
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009SV4-EX2 primer

<400>   31
gtgatggtga tggtggggtc cagccttgcg ctcgc                                35


<210>   32
<211>   34
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009-AP1 primer

<400>   32
accatgccca gcggctgccg ctgcctgcat ctcg                                34


<210>   33
<211>   36
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009-AP2 primer

<400>   33
agtcacgccc atggaagcct ttgtcacaga acttgc                              36


<210>   34
<211>   38
<212>   DNA
<213>   Artificial sequence

<220>
<223>   SCS0009-AP3 primer

<400>   34
```

gcaagttctg tgacaaaggc ttccatgggc gtgactgc   38


```
<210>  35
<211>  39
<212>  DNA
<213>  Artificial sequence

<220>
<223>  SCS0009-AP4 primer

<400>  35
```
tcacagtgct gtggtctttc caggctcagg gggcaagtc   39


```
<210>  36
<211>  37
<212>  DNA
<213>  Artificial sequence

<220>
<223>  SCS0009-EX1 primer

<400>  36
```
aagcaggctt cgccaccatg cccagcggct gccgctg   37


```
<210>  37
<211>  35
<212>  DNA
<213>  Artificial sequence

<220>
<223>  SCS0009-EX2 primer

<400>  37
```
gtgatggtga tggtgcagtg ctgtggtctt tccag   35


```
<210>  38
<211>  385
<212>  PRT
<213>  Mus musculus

<400>  38
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Met Ile Ala Thr Gly Ala Leu Leu Arg Val Leu Leu Leu Leu Leu Ala
1   5   10   15

Phe Gly His Ser Thr Tyr Gly Ala Glu Cys Asp Pro Pro Cys Asp Pro
            20   25   30

Gln Tyr Gly Phe Cys Glu Ala Asp Asn Val Cys Arg Cys His Val Gly
        35   40   45

Trp Glu Gly Pro Leu Cys Asp Lys Cys Val Thr Ala Pro Gly Cys Val
    50   55   60

Asn Gly Val Cys Lys Glu Pro Trp Gln Cys Ile Cys Lys Asp Gly Trp

65   70   75   80

Asp Gly Lys Phe Cys Glu Ile Asp Val Arg Ala Cys Thr Ser Thr Pro
                85   90   95

Cys Ala Asn Asn Gly Thr Cys Val Asp Leu Glu Lys Gly Gln Tyr Glu
            100   105   110

Cys Ser Cys Thr Pro Gly Phe Ser Gly Lys Asp Cys Gln His Lys Ala
            115   120   125

Gly Pro Cys Val Ile Asn Gly Ser Pro Cys Gln His Gly Gly Ala Cys
    130   135   140

Val Asp Asp Glu Gly Gln Ala Ser His Ala Ser Cys Leu Cys Pro Pro
145   150   155   160

Gly Phe Ser Gly Asn Phe Cys Glu Ile Val Ala Ala Thr Asn Ser Cys
                165   170   175

Thr Pro Asn Pro Cys Glu Asn Asp Gly Val Cys Thr Asp Ile Gly Gly
            180   185   190

Asp Phe Arg Cys Arg Cys Pro Ala Gly Phe Val Asp Lys Thr Cys Ser
            195   200   205

Arg Pro Val Ser Asn Cys Ala Ser Gly Pro Cys Gln Asn Gly Gly Thr
    210   215   220

Cys Leu Gln His Thr Gln Val Ser Phe Glu Cys Leu Cys Lys Pro Pro
225   230   235   240

Phe Met Gly Pro Thr Cys Ala Lys Lys Arg Gly Ala Ser Pro Val Gln
                245   250   255

Val Thr His Leu Pro Ser Gly Tyr Gly Leu Thr Tyr Arg Leu Thr Pro
            260   265   270

Gly Val His Glu Leu Pro Val Gln Gln Pro Glu Gln His Ile Leu Lys
            275   280   285

Val Ser Met Lys Glu Leu Asn Lys Ser Thr Pro Leu Leu Thr Glu Gly
    290   295   300

Gln Ala Ile Cys Phe Thr Ile Leu Gly Val Leu Thr Ser Leu Val Val
305   310   315   320

Leu Gly Thr Val Ala Ile Val Phe Leu Asn Lys Cys Glu Thr Trp Val
                325   330   335

Ser Asn Leu Arg Tyr Asn His Thr Phe Arg Lys Lys Lys Asn Leu Leu
            340   345   350

Leu Gln Tyr Asn Ser Gly Glu Glu Leu Ala Val Asn Ile Ile Phe Pro
            355   360   365

Glu Lys Ile Asp Met Thr Thr Phe Asn Lys Glu Ala Gly Asp Glu Glu
    370   375   380

Ile
385

<210>   39
<211>   294
<212>   PRT
<213>   Homo sapiens

<400>   39

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1   5   10   15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20   25   30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35   40   45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
                85   90   95

Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Glu Tyr His Cys Val
                100   105   110

Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
            115   120   125

Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
    130   135   140

Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
145   150   155   160

Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
                165   170   175

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
                180   185   190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
            195   200   205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
    210   215   220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
225   230   235   240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr
                245   250   255

Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            260   265   270

Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
        275   280   285

Val Arg Arg Gln Glu Ala
    290

<210>   40
<211>   300
<212>   PRT
<213>   Homo sapiens

<400>   40

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1   5   10   15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20   25   30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
        35   40   45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50   55   60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65   70   75   80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
            85   90   95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
            100   105   110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
        115   120   125

Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn
    130   135   140

Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys
145   150   155   160

Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp
            165   170   175

Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly
        180   185   190

Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe
        195   200   205

Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly
    210   215   220

```
Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser
225             230             235             240

Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro
            245             250             255

Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val
            260             265             270

Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg
            275             280             285

Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala
    290             295             300
```

```
<210>   41
<211>   1131
<212>   DNA
<213>   Homo sapiens


<220>
<221>   exon
<222>   (1)..(1131)


<400>   41
atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc att        48
Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5               10              15

ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac        96
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
            20              25              30

tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt       144
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35              40              45

gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct       192
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
    50              55              60

ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac       240
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65              70              75              80

agt ggc tgg gca gat gaa cat atc tgt acc acg cag tcc ccc tgc cag       288
Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
            85              90              95

aat gga ggc cag tgc atg tat gac ggg ggc ggt gag tac cat tgt gtg       336
Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val
            100             105             110

tgc tta cca ggc ttc cat ggg cgt gac tgc gag cgc aag gct gga ccc       384
Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
            115             120             125
```

```
tgt gaa cag gca ggc tcc cca tgc cgc aat ggc ggg cag tgc cag gac          432
Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
    130             135                 140

gac cag ggc ttt gct ctc aac ttc acg tgc cgc tgc ttg gtg ggc ttt          480
Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
145             150                 155                 160

gtg ggt gcc cgc tgt gag gta aat gtg gat gac tgc ctg atg cgg cct          528
Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
            165                 170                 175

tgt gct aac ggt gcc acc tgc ctt gac ggc ata aac cgc ttc tcc tgc          576
Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
        180                 185                 190

ctc tgt cct gag ggc ttt gct gga cgc ttc tgc acc atc aac ctg gat          624
Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
        195                 200                 205

gac tgt gcc agc cgc cca tgc cag aga ggg gcc cgc tgt cgg gac cgt          672
Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
    210                 215                 220

gtc cat gac ttc gac tgc ctc tgc ccc agt ggc tat ggt ggc aag act          720
Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
225                 230                 235                 240

tgt gag ctt gtc tta cct gtc cca gac ccc cca acc aca gtg gac acc          768
Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr
                245                 250                 255

cct cta ggg ccc acc tca gct gta gtg gta cct gcc acg ggg cca gcc          816
Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            260                 265                 270

ccc cac agc gca ggg gct ggt ctg ctg cgg atc tca gtg aag gag gtg          864
Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
        275                 280                 285

gtg cgg agg caa gag gct ggg cta ggt gag cct agc ttg gtg gcc ctg          912
Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu
    290                 295                 300

gtg gtg ttt ggg gcc ctc act gct gcc ctg gtt ctg gct act gtg ttg          960
Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu
305                 310                 315                 320

ctg acc ctg agg gcc tgg cgc cgg ggt gtc tgc ccc cct gga ccc tgt          1008
Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys
                325                 330                 335

tgc tac cct gcc cca cac tat gct cca gcg tgc cag gac cag gag tgt          1056
Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys
            340                 345                 350

cag gtt agc atg ctg cca gca ggg ctc ccc ctg cca cgt gac ttg ccc          1104
Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro
        355                 360                 365
```

```
cct gag cct gga aag acc aca gca ctg                              1131
Pro Glu Pro Gly Lys Thr Thr Ala Leu
    370             375
```

```
<210>  42
<211>  402
<212>  DNA
<213>  Homo sapiens
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```
<220>
<221>  exon
<222>  (1)..(402)
```

```
<400>  42
atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc att      48
Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile
1               5                   10                  15

ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc cac      96
Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His
                20              25                  30

tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg tgt     144
Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
            35                  40                  45

gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg cct     192
Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro
        50                  55                  60

ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc cac     240
Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His
65                  70                  75                  80

agt ggc tgg gca ggc aag ttc tgt gac aaa gat gaa cat atc tgt acc     288
Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr
                85                  90                  95

acg cag tcc ccc tgc cag aat gga ggc cag tgc atg tat gac ggg ggc     336
Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly
                100                 105                 110

ggt gag tac cat tgt gtg tgc tta cca ggc ttc cat ggg cgt gac tgc     384
Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys
            115                 120                 125

gag cgc aag gct gga ccc                                              402
Glu Arg Lys Ala Gly Pro
    130
```

```
<210>  43
<211>  1199
<212>  DNA
<213>  Homo sapiens
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```
<220>
<221>  exon
<222>  (37)..(1185)

<400>  43
tccatccgtc cgtccctcct ggggccggcg ctgacc atg ccc agc ggc tgc cgc          54
                                        Met Pro Ser Gly Cys Arg
                                        1               5

tgc ctg cat ctc gtg tgc ctg ttg tgc att ctg ggg gct ccc ggt cag         102
Cys Leu His Leu Val Cys Leu Leu Cys Ile Leu Gly Ala Pro Gly Gln
            10                  15                  20

cct gtc cga gcc gat gac tgc agc tcc cac tgt gac ctg gcc cac ggc         150
Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala His Gly
        25                  30                  35

tgc tgt gca cct gac ggc tcc tgc agg tgt gac ccg ggc tgg gag ggg         198
Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp Glu Gly
        40                  45                  50

ctg cac tgt gag cgc tgt gtg agg atg cct ggc tgc cag cac ggt acc         246
Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His Gly Thr
55                  60                  65                  70

tgc cac cag cca tgg cag tgc atc tgc cac agt ggc tgg gca ggc aag         294
Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala Gly Lys
                    75                  80                  85

ttc tgt gac aaa gat gaa cat atc tgt acc acg cag tcc ccc tgc cag         342
Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln
            90                  95                  100

aat gga ggc cag tgc atg tat gac ggg ggc ggt gag tac cat tgt gtg         390
Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val
        105                 110                 115

tgc tta cca ggc ttc cat ggg cgt gac tgc gag cgc aag gct gga ccc         438
Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro
        120                 125                 130

tgt gaa cag gca ggc tcc cca tgc cgc aat ggc ggg cag tgc cag gac         486
Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp
135                 140                 145                 150

gac cag ggc ttt gct ctc aac ttc acg tgc cgc tgc ttg gtg ggc ttt         534
Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe
                155                 160                 165

gtg ggt gcc cgc tgt gag gta aat gtg gat gac tgc ctg atg cgg cct         582
Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro
            170                 175                 180

tgt gct aac ggt gcc acc tgc ctt gac ggc ata aac cgc ttc tcc tgc         630
Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys
            185                 190                 195

ctc tgt cct gag ggc ttt gct gga cgc ttc tgc acc atc aac ctg gat         678
```

```
Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp
    200                 205                 210

gac tgt gcc agc cgc cca tgc cag aga ggg gcc cgc tgt cgg gac cgt        726
Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg
215                 220                 225                 230

gtc cac gac ttc gac tgc ctc tgc ccc agt ggc tat ggt ggc aag acc        774
Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr
                235                 240                 245

tgt gag ctt gtc tta cct gtc cca gac ccc cca acc aca gtg gac acc        822
Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr
                250                 255                 260

cct cta ggg ccc acc tca gct gta gtg gta cct gcc acg ggg cca gcc        870
Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr Gly Pro Ala
            265                 270                 275

ccc cac agc gca ggg gct ggt ctg ctg cgg atc tca gtg aag gag gtg        918
Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val
    280                 285                 290

gtg cgg agg caa gag gct ggg cta ggt gag cct agc ttg gtg gcc ctg        966
Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu
295                 300                 305                 310

gtg gtg ttt ggg gcc ctc act gct gcc ctg gtt ctg gct act gtg ttg       1014
Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu
                315                 320                 325

ctg acc ctg agg gcc tgg cgc cgg ggt gtc tgc ccc cct gga ccc tgt       1062
Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys
            330                 335                 340

tgc tac cct gcc cca cac tat gct cca gcg tgc cag gac cag gag tgt       1110
Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys
            345                 350                 355

cag gtt agc atg ctg cca gca ggg ctc ccc ctg cca cgt gac ttg ccc       1158
Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro
    360                 365                 370

cct gag cct gga aag acc aca gca ctg tgatggaggt gggg               1199
Pro Glu Pro Gly Lys Thr Thr Ala Leu
375                 380
```

```
<210>   44
<211>   1062
<212>   DNA
<213>   Homo sapiens


<220>
<221>   exon
<222>   (4)..(1058)

<400>   44
acc atg ccc agc ggc tgc cgc tgc ctg cat ctc gtg tgc ctg ttg tgc        48
```

```
            Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys
            1               5               10              15

att ctg ggg gct ccc ggt cag cct gtc cga gcc gat gac tgc agc tcc        96
Ile Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser
                20              25              30

cac tgt gac ctg gcc cac ggc tgc tgt gca cct gac ggc tcc tgc agg       144
His Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg
            35              40              45

tgt gac ccg ggc tgg gag ggg ctg cac tgt gag cgc tgt gtg agg atg       192
Cys Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met
            50              55              60

cct ggc tgc cag cac ggt acc tgc cac cag cca tgg cag tgc atc tgc       240
Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys
            65              70              75

cac agt ggc tgg gca ggc aag ttc tgt gac aaa ggc ttc cat ggg cgt       288
His Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg
80              85              90              95                      .

gac tgc gag cgc aag gct gga ccc tgt gaa cag gca ggc tcc cca tgc       336
Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys
                100             105             110

cgc aat ggc ggg cag tgc cag gac gac cag ggc ttt gct ctc aac ttc       384
Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe
            115             120             125

acg tgc cgc tgc ttg gtg ggc ttt gtg ggt gcc cgc tgt gag gta aat       432
Thr Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn
            130             135             140

gtg gat gac tgc ctg atg cgg cct tgt gct aac ggt gcc acc tgc ctt       480
Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu
145             150             155

gac ggc ata aac cgc ttc tcc tgc ctc tgt cct gag ggc ttt gct gga       528
Asp Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly
160             165             170             175

cgc ttc tgc acc atc aac ctg gat gac tgt gcc agc cgc cca tgc cag       576
Arg Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln
            180             185             190

aga ggg gcc cgc tgt cgg gac cgt gtc cac gac ttc gac tgc ctc tgc       624
Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys
            195             200             205

ccc agt ggc tat ggt ggc aag acc tgt gag ctt gtc tta cct gtc cca       672
Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro
            210             215             220

gac ccc cca acc aca gtg gac acc cct cta ggg ccc acc tca gct gta       720
Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val
            225             230             235
```

```
gtg gta cct gcc acg ggg cca gcc ccc cac agc gca ggg gct ggt ctg          768
Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu
240             245                 250                 255

ctg cgg atc tca gtg aag gag gtg gtg cgg agg caa gag gct ggg cta          816
Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu
                260                 265                 270

ggt gag cct agc ttg gtg gcc ctg gtg gtg ttt ggg gcc ctc act gct          864
Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala
            275                 280                 285

gcc ctg gtt ctg gct act gtg ttg ctg acc ctg agg gcc tgg cgc cgg          912
Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg
        290                 295                 300

ggt gtc tgc ccc cct gga ccc tgt tgc tac cct gcc cca cac tat gct          960
Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala
    305                 310                 315

cca gcg tgc cag gac cag gag tgt cag gtt agc atg ctg cca gca ggg         1008
Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly
320                 325                 330                 335

ctc ccc ctg cca cgt gac ttg ccc cct gag cct gga aag acc aca gca         1056
Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala
                340                 345                 350

ct gtga                                                                  1062
```